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#### **CLAIMS**

The invention claimed is:

5 1. A device comprising:

a memory; and

a processor coupled with the memory, wherein the processor is adapted to generate a schedule for exchanging data with only a first peripheral device during a first time window, and for exchanging data with only a second peripheral device after the first time window;

transmit at least one multi-poll scheduling frame that encodes the schedule; exchange data with the first peripheral device after the scheduled first time window starts;

complete exchanging data with the first peripheral device before the first time window ends;

then transmit a rescheduling frame; and

then exchange data with the second peripheral device before the first time window ends.

- 20 2. The device of claim 1, wherein the rescheduling frame is a null frame.
  - 3. The device of claim 1,

wherein the generated schedule provides for exchanging data with only the second peripheral device during a second time window, and that the second time window alternate with the first time window according to a periodicity,

and the processor is further adapted to: encode data about the periodicity in the multi-poll scheduling frame.

- 30 4. The device of claim 3, wherein the rescheduling frame is a null frame.
  - A device comprising:
     a memory; and

a processor coupled with the memory, wherein the processor is adapted to receive at least one multi-poll scheduling frame;

decode from the received multi-poll scheduling frame a schedule for a first time window and for a subsequent second time window during which to exchange data;

during the first time window, receive a rescheduling frame;
reschedule the second time window in response to the rescheduling frame; and
then exchange data during the rescheduled second time window before the
first time window ends.

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- 6. The device of claim 5, wherein the second time window is rescheduled to start immediately after the rescheduling frame.
- 15 7. The device of claim 5, wherein the rescheduling frame is a null frame.
- The device of claim 5, wherein the processor is further adapted to:
   decode from the received multi-poll scheduling frame periodicity data about
   alternating the first time window and the second time window.
  - 9. The device of claim 8, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

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- 10. The device of claim 8, wherein the rescheduling frame is a null frame.
- 11. An article comprising: a storage medium, said storage medium having stored thereon instructions, that, when executed by at least one device, result in:

generating a schedule for exchanging data with only a first peripheral device during a first time window, and for exchanging data with only a second peripheral device after the first time window;

transmitting at least one multi-poll scheduling frame that encodes the schedule;

exchanging data with the first peripheral device after the scheduled first time window starts;

5 completing exchanging data with the first peripheral device before the first time window ends:

then transmitting a rescheduling frame; and

then exchanging data with the second peripheral device before the first time window ends.

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- 12. The article of claim 11, wherein the rescheduling frame is a null frame.
- 13. The article of claim 11,

wherein the generated schedule provides for exchanging data with only the second peripheral device during a second time window, and that the second time window alternate with the first time window according to a periodicity,

and the instructions further result in:

encoding data about the periodicity in the multi-poll scheduling frame.

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- 14. The article of claim 13, wherein the rescheduling frame is a null frame.
- 15. An article comprising: a storage medium, said storage medium having stored 25 thereon instructions, that, when executed by at least one device, result in:

receiving at least one multi-poll scheduling frame;

decoding from the received multi-poll scheduling frame a schedule for a first time window and for a subsequent second time window during which to exchange data;

30 during the first time window, receiving a rescheduling frame; rescheduling the second time window in response to the rescheduling frame; and

then exchanging data during the rescheduled second time window before the first time window ends.

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16. The article of claim 15, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

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- 17. The article of claim 15, wherein the rescheduling frame is a null frame.
- 18. The article of claim 15, wherein the instructions further result in:
  decoding from the received multi-poll scheduling frame periodicity data about alternating the first time window and the second time window.
  - 19. The article of claim 18, wherein the second time window is rescheduled to start immediately after the rescheduling frame.
  - 20. The article of claim 18, wherein the rescheduling frame is a null frame.
- 20 21. A method comprising:

generating a schedule for exchanging data with only a first peripheral device during a first time window, and for exchanging data with only a second peripheral device after the first time window;

transmitting at least one multi-poll scheduling frame that encodes the schedule;

exchanging data with the first peripheral device after the scheduled first time window starts;

completing exchanging data with the first peripheral device before the first time window ends;

then transmitting a rescheduling frame; and
then exchanging data with the second peripheral device before the first time
window ends.

#### 22. The method of claim 21, wherein

the rescheduling frame is a null frame.

## 23. The method of claim 21,

wherein the generated schedule provides for exchanging data with only the second peripheral device during a second time window, and that the second time window alternate with the first time window according to a periodicity,

and further comprising:

encoding data about the periodicity in the multi-poll scheduling frame.

10 24. The method of claim 23, wherein the rescheduling frame is a null frame.

## 25. A method comprising:

receiving at least one multi-poll scheduling frame;

decoding from the received multi-poll scheduling frame a schedule for a first time window and for a subsequent second time window during which to exchange data;

during the first time window, receiving a rescheduling frame; rescheduling the second time window in response to the rescheduling frame;

20 and

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then exchanging data during the rescheduled second time window before the first time window ends.

## 26. The method of claim 25, wherein

25 the second time window is rescheduled to start immediately after the rescheduling frame.

# 27. The method of claim 25, wherein

the rescheduling frame is a null frame.

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## 28. The method of claim 25, further comprising:

decoding from the received multi-poll scheduling frame periodicity data about alternating the first time window and the second time window.

- 29. The method of claim 28, wherein the second time window is rescheduled to start immediately after the rescheduling frame.
- 5 30. The method of claim 28, wherein the rescheduling frame is a null frame.